



 **SUNY CANTON**

Industrial Technology Management Program
Canino School of Engineering Technology
Fall 2016 Assessment Report



Curriculum Coordinator: Eric Y. Cheng

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What was assessed? Student learning outcomes list:

- *SLO 1 – Communication Skills*
 - *Students are expected to be able to communicate clearly, concisely, and correctly in the written, spoken, visual, and electronic form that fulfills the purpose and meets the needs of audiences*
- *SLO 2 – Problem Solving Skills*
 - *Students are expected to understand how to apply mathematical and analytical skills to formulate and solve problems*
- *SLO 3 – Knowledge Management Skills*
 - *Students are expected to be able to produce, and present work-related documents and information effectively and accurately*
- *SLO 4 - Technical Skills*
 - *Students are expected to use a variety of technological tools appropriate and necessary for the performance of tasks*



What was assessed? Student learning outcomes list: (cont.)

- *SLO 5 – Teamwork Skills*
 - *Students are expected to be able to interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals*
- *SLO 6 – Engineering Management Skills*
 - *Students are expected to be able to analyze and resolve complex problems through the application of systematic approaches*
- *SLO 7 – Adaptability and Flexibility Skills*
 - *Students are expected to know how to adapt to new situations and demands by applying and/or updating his/her knowledge and skills*



Where were outcomes assessed?

- *SLO 1 - Communication Skills*
ENGL 101, ENGL 101, BSAD340 and SOET477
- *SLO 2 - Problem Solving Skills*
ECON 101, ECON 103, MATH123, MATH141, MATH161 and SOET477
- *SLO 3 - Knowledge Management Skills*
MATH141, BSAD340, SOET377 and SOET477
- *SLO 4 - Technical Skills*
SOET116, SOET348, SOET361, SOET477 and Program Electives
- *SLO 5 - Teamwork Skills*
BSAD301, BSAD340, SOET361 and SOET477
- *SLO 6 - Engineering Management Skills*
BSAD201, BSAD340, BSAD449 and SOET377
- *SLO 7 - Adaptability and Flexibility Skills*
SOET361, SOET430 and SOET477



How was the assessment accomplished?

- Student work assessed:
 - Quizzes
 - Midterm and final exams
 - Oral presentations
 - Group projects
 - Term papers
- Measurement strategy:
 - Applicable rubrics used for oral presentations, term papers and group projects
 - % of questions answered correctly on quizzes and midterm/final exams
- Sample size:
 - All students who take the designated assessed courses



Assessment results: What have the data told us?

- **SLO 1 - Communication Skills**

Insufficient data in the upper division management communications course BSAD340 due to the small sample size($n=2$), however the outcomes are satisfactory in the lower division communication course and the senior year capstone project. Overall, excluding BSAD340 the outcomes have met the designated target.

- **SLO 2 - Problem Solving Skills**

Except MATH123(39% not met), all other related courses in this SLO have less than 20% of students failed to meet the objective. The math skills continue to be a challenge for engineering students

- **SLO 3 - Knowledge Management Skills**

All related courses in this SLO have less than 20% of students failed to meet the objective. It's significantly better than last year's outcomes

- **SLO 4 - Technical Skills**

31% of students in SOET361 failed to meet the learning objectives however 62% of student exceeded the objective. This indicates there exists a great variation among students which could be due to students' working ethics or backgrounds



Assessment results: What have the data told us? (cont.)

- **SLO 5 - Teamwork Skills**

31% of students in SOET361 failed to meet the learning objective, however students performed very well in BSAD301 and SOET477. Again, this indicates there exists a great variation among students which could be due to students' working ethics or backgrounds

- **SLO 6 - Engineering Management Skills**

33% of students in BSAD201 failed to meet the learning objective. However students performed very well in SOET477. It could be due to students' backgrounds or interests in the course

- **SLO 7 - Adaptability and Flexibility Skills**

In general students have performed very well for this SLO. The only underperformed course SOET361 could be due to students' working ethics or backgrounds



Data-driven decisions: How the program has or plans to “close the loop” based on these results.

- Continue to revise the course curriculum to better align with the program’s objectives according to the SLO outcomes
- Continue to revise the related courses to better align with the student learning outcomes
- Advise students in the program to seek for additional instructional support when needed, e.g. tutoring.



What resources were used or have been requested to close the loop?

- ITM program is an zero overhead cost program
- Individual faculty time revising within a course
- Program coordinator and department faculty time making revisions spanning more than one course or adjusting the curriculum



Attachments: 2016 SLO Findings



SLO 1 - *Communication Skills*

Assessment Findings Data

SLO 1 - Communicate clearly, concisely, and correctly in the written, spoken visual, and electronic form that fulfills the purpose and meets the needs of audiences.

	Measures <u>N</u>	Not Met		Met		Exceeded		No Findings	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
All Courses	78	5	6%	14	18%	41	53%	18	23%
BSAD 340	2	0	0%	0	0%	1	50%	1	50%
ENGL 101	69	5	7%	9	13%	38	55%	17	25%
SOET 477	7	0	0%	5	71%	2	29%	0	0%



SLO 2 - *Problem Solving Skills*

Assessment Findings Data

SLO 2 - Apply mathematical and analytical skills to formulate and solve problems.

	Measures <u>N</u>	Not Met		Met		Exceeded		No Findings	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
All Courses	87	9	10%	16	18%	14	16%	48	55%
ECON 101	26	1	4%	0	0%	7	27%	18	69%
ECON 103	7	1	14%	0	0%	0	0%	6	86%
MATH 123	18	7	39%	3	17%	5	28%	3	17%
MATH 141	16	0	0%	8	50%	0	0%	8	50%
MATH 161	13	0	0%	0	0%	0	0%	13	100%
SOET 477	7	0	0%	5	71%	2	29%	0	0%



SLO 3 - Knowledge Management Skills Assessment Findings Data

SLO 3 - Interpret, produce, and present work-related documents and information effectively and accurately.

	Measures	Not Met		Met		Exceeded		No Findings	
	<u>N</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
All Courses	28	0	0%	13	46%	5	18%	10	36%
BSAD 340	2	0	0%	0	0%	1	50%	1	50%
MATH 141	16	0	0%	8	50%	0	0%	8	50%
SOET 377	3	0	0%	0	0%	2	67%	1	33%
SOET 477	7	0	0%	5	71%	2	29%	0	0%



SLO 4 - *Technical Skills*

Assessment Findings Data

SLO 4 - Use a variety of technological tools appropriate & necessary for the performance of tasks.

	Measures	Not Met		Met		Exceeded	
	N	N	%	N	%	N	%
All Courses	20	4	20%	9	45%	7	35%
BSAD/SOET 361	13	4	31%	4	31%	5	38%
SOET 477	7	0	0%	5	71%	2	29%



SLO 5 - *Teamwork Skills*

Assessment Findings Data

SLO 5 - Interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goal.

	Measures	Not Met		Met		Exceeded		No Findings	
	<u>N</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
All Courses	35	5	14%	14	40%	15	43%	1	3%
BSAD 301	13	1	8%	5	38%	7	54%	0	0%
BSAD 340	2	0	0%	0	0%	1	50%	1	50%
BSAD/SOET 361	13	4	31%	4	31%	5	38%	0	0%
SOET 477	7	0	0%	5	71%	2	29%	0	0%



SLO 6 - *Engineering Management Skills*

Assessment Findings Data

SLO 6 - Analyze and resolve complex problems through the application of systematic approaches.

	Measures <u>N</u>	Not Met		Met		Exceeded		No Findings	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
All Courses	12	1	8%	5	42%	5	42%	1	8%
BSAD 201	3	1	33%	0	0%	2	67%	0	0%
BSAD 340	2	0	0%	0	0%	1	50%	1	50%
SOET 477	7	0	0%	5	71%	2	29%	0	0%



SLO 7 - *Adaptability and Flexibility Skills*

Assessment Findings Data

SLO 7 - Adapt to new situations and demands by applying and/or updating his/her knowledge & skills.

	Measures	Not Met		Met		Exceeded		No Findings	
		<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
All Courses	28	4	14%	9	32%	7	25%	8	29%
BSAD/SOET 361	13	4	31%	4	31%	5	38%	0	0%
BSAD/SOET 430	8	0	0%	0	0%	0	0%	8	100%
SOET 477	7	0	0%	5	71%	2	29%	0	0%

